SERVICE MANUAL

FISHER

MT-M66

Stereo Turntable

(EUROPE)

134 082 45

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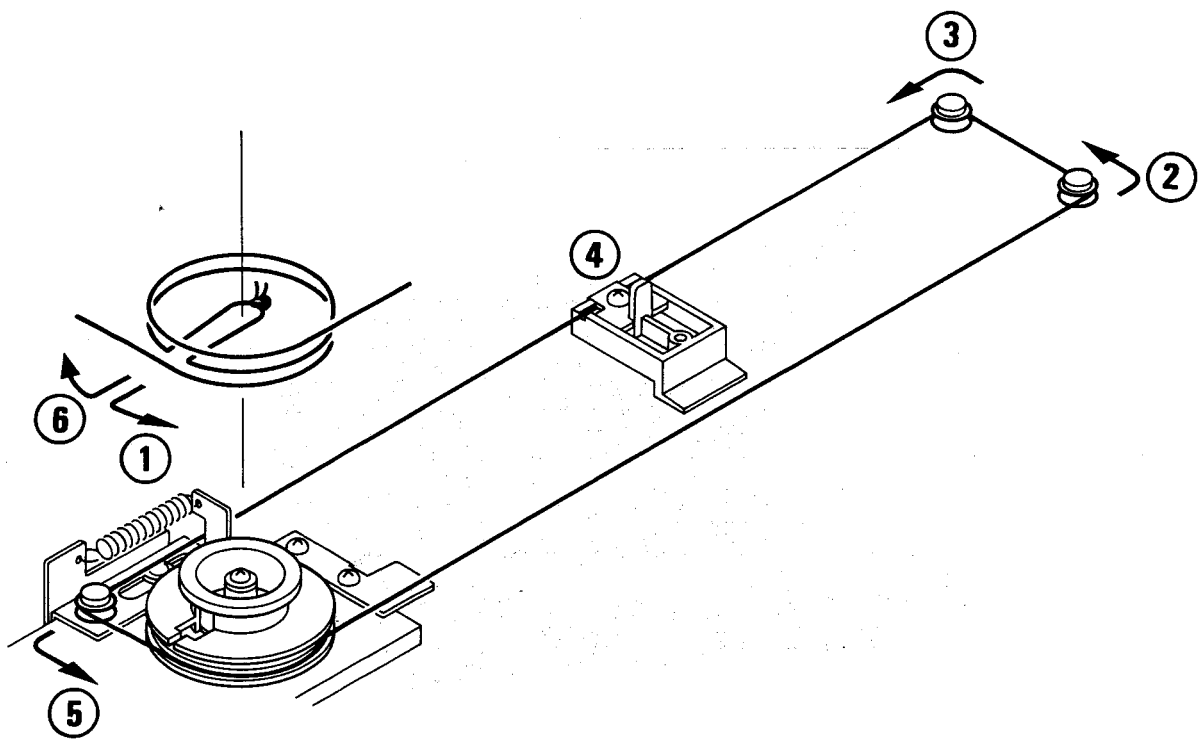
ARM FEED CORD STRINGING

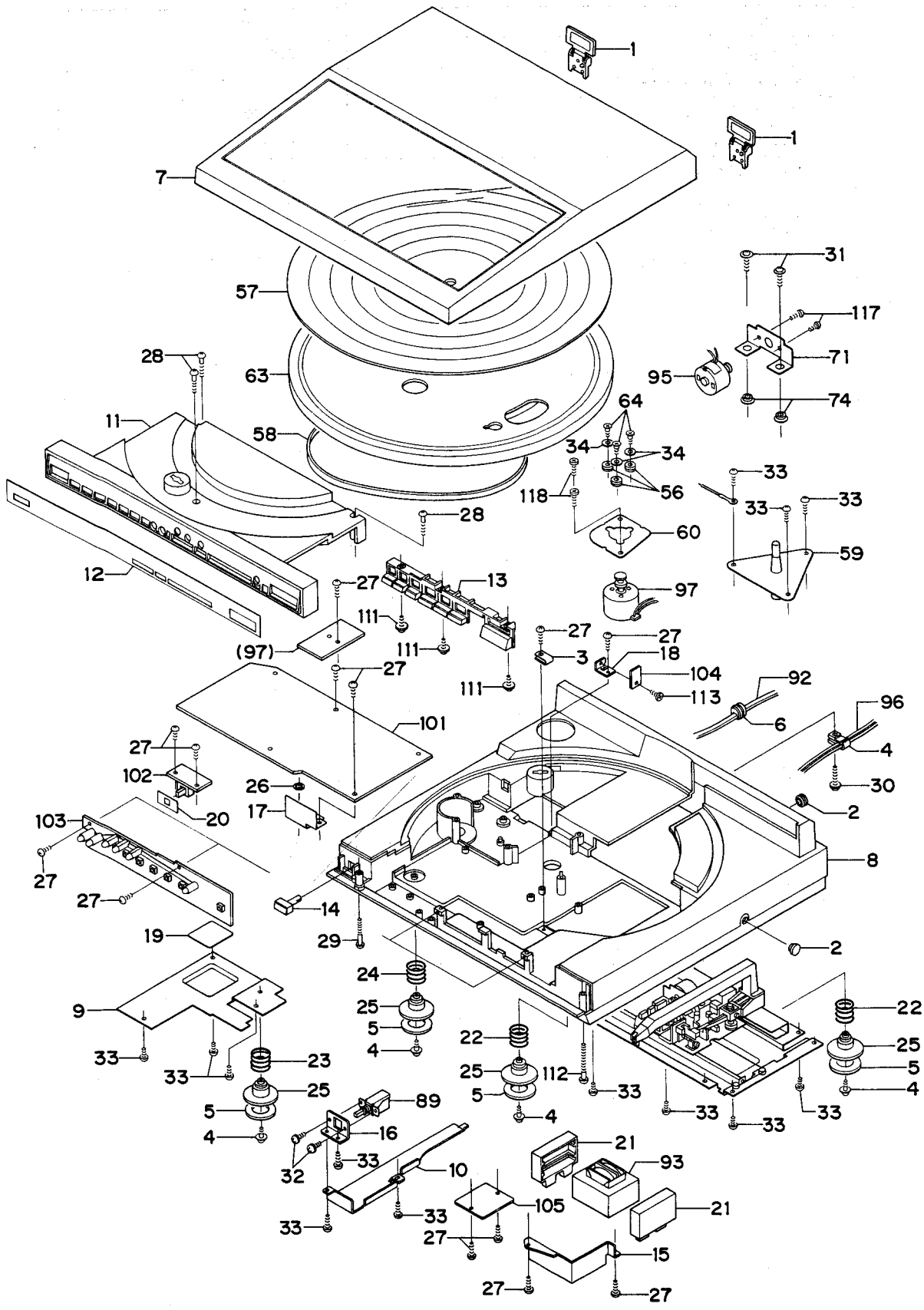


SPECIFICATIONS

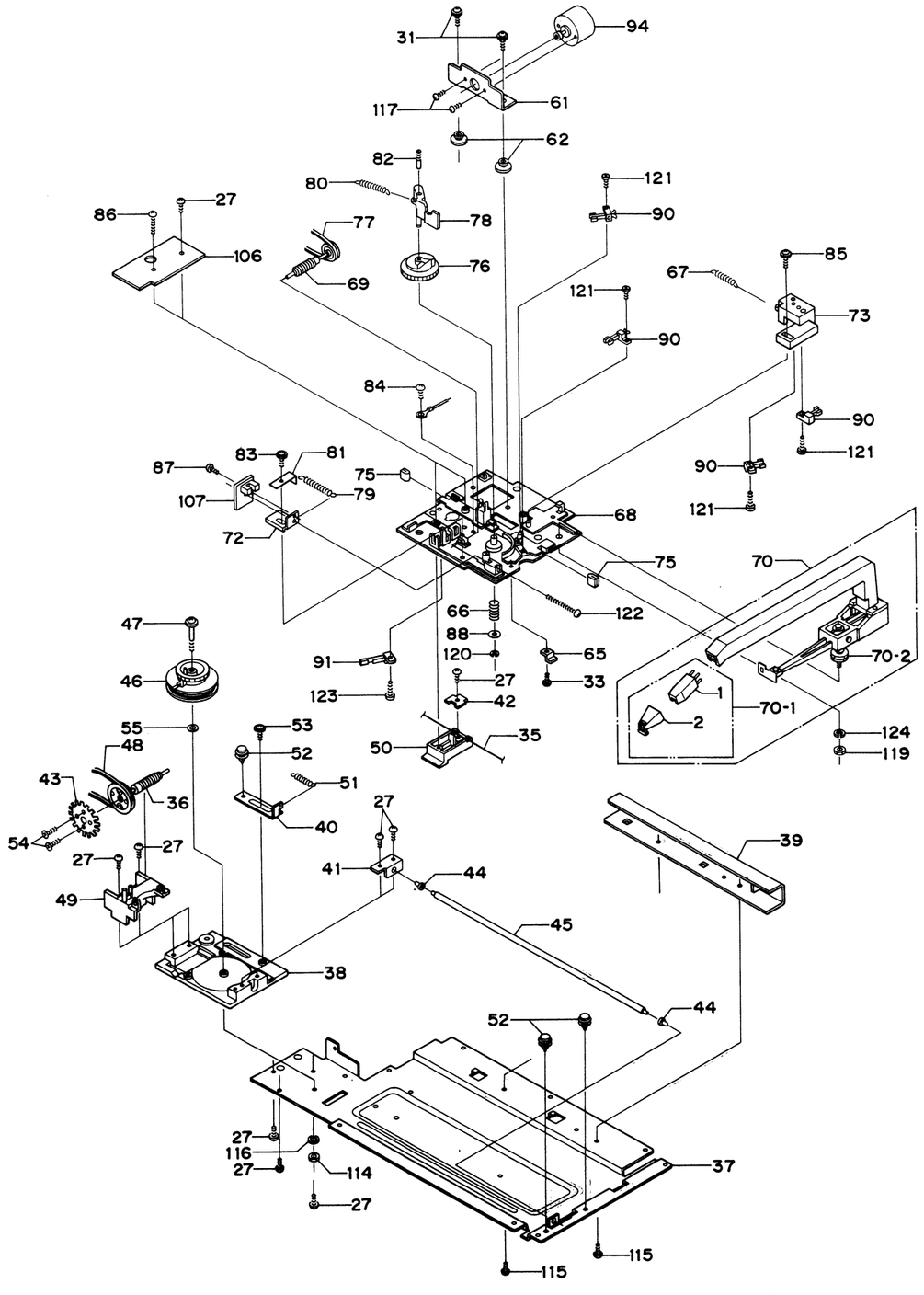
TURNTABLE		MT-M66
Motor		DC Servo
Drive System		Belt
Wow and Flutter (WRMS)		0.08 %
Rumble (DIN 45539B)		−65 dB
Speed Variation		±1.5 %
Tracking Force		2 g
Platter Diameter		296 mm
Platter Weight		0.4 kg
Record Speed Selector		33-1/3 rpm / 45 rpm
Automatic Functions	Stop	Yes
	Reject	Yes
	Repeat	Yes
Automatic Tonearm Return at End of Record		Yes
Manual Functions	Start	Yes
	Stop	Yes
Tonearm Data	Resonance	<18 Hz
	Effective Length	130 mm
	Shape	Straight
Bearing Type	Horizontal Friction Sensitivity	Pivot 0.15 g
	Vertical Friction Sensitivity	Pivot 0.2 g
Max. Tracking Error		±0.2°
GENERAL Power Requirements		AC 220 V 50 Hz
Power Consumption		10 W
Dimensions (W x H x D)		335 x 92 x 345 mm
Weight (approx.)		3.6 kg

Because its products are subject to continuous improvement, Fisher Corporation reserves the right to modify product designs and specifications without notice and without incurring any obligation.

CABINET & CHASSIS EXPLODED VIEW



CABINET & CHASSIS EXPLODED VIEW (Continued)



CABINET & CHASSIS PARTS LIST

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

Ref. No.	Part No.	Description	Q'ty
	PACKAGE		
	131-6-2119-02081	Bag Polyethylene-exp	1
	131-6-3069-17050	Patching Sheet (Cabinet Rear)	1
	131-6-3069-17050	Patching Sheet (Pad Pick-up)	1
	131-6-9439-00400	Ribbon	2
	141-2-4219-32700	Screw Transit	1
	141-6-1139-95020	Box Corrugate-exp	1
	141-6-2519-20990	Bag Polyethylene-exp	1
	141-6-3119-23100	Pad Front	1
	141-6-3119-23200	Pad Rear	1
	141-6-3119-23401	Pad Mat T.T	1
	141-6-3119-23500	Pad Pick-up	1
	141-6-3119-25600	Pad Lid	1
	141-6-3319-13200	Spacer	3
	141-6-4559-03300	Serial No. Sheet	2
	ACCESSORIES		
	131-6-2719-10401	Bag Fan	1
	134-2-2901-11601	Adapter EP	1
	142-6-4119-33060	Explanatory Booklet	1
	CABINET		
	4-2359-76794	Connector 3P Assy [CN4]	1
	4-2359-77145	Connector 1P Assy (Terminal P.C.B.)	1
	4-2359-78077	Connector 1P Assy (Control P.C.B.)	1
	4-2359-78400	Connector 4P Assy [CN3]	1
	131-2-3608-14100	Cramp Wire	7
	134-6-4739-13403	Stylus Label	1
	141-2-1449-56275	Name Plate	1
	141-6-4559-03300	Serial No. Sheet	1
1	131-0-2002-16801	Hinge Assy	2
2	131-2-2904-11000	Pad Lid	2
3	131-2-3608-11000	Cramp Wire	1
4	131-2-3608-12405	Cramp Wire	1
5	131-2-5203-23603	Felt	4
6	131-2-6111-21300	Bushing	1
7	141-0-1249-30515	Lid Assy	1
8	141-2-1119-99711	Cabinet	1
9	141-2-1149-35001	Cover	1
10	141-2-1149-39300	Cover	1
11	141-2-1219-31306	Panel Front	1
12	141-2-1439-14909	Panel Control	1
13	141-2-1659-40701	Knob	1
14	141-2-1659-76400	Knob	1
15	141-2-3169-24300	Metal Mount	1
16	141-2-3169-24900	Metal Mount	1
17	141-2-3229-52600	Cover Shield	1
18	141-2-3519-73400	Angle Mount	1
19	141-2-4359-36300	Plate Sever	1
20	141-2-4419-21100	Cloth	1
21	141-2-4459-34400	Cushion	2

Ref. No.	Part No.	Description	Q't
22	141-2-8559-06500	Spring Mounting	2
23	141-2-8559-06501	Spring Mounting	1
24	141-2-8559-06502	Spring Mounting	1
25	141-2-4459-31700	Cushion (leg)	4
26	131-2-4220-10501	Ring Snap	1
27	131-2-4201-19501	Screw, Button Hd. Tapping	22
28	131-2-4201-19507	Screw, Button Hd. Tapping	3
29	141-2-4219-09601	Screw	1
30	131-2-4201-25203	Screw, Brazier Hd. Tapping, +M3.0x16	1
31	134-2-4201-13400	Screw	8
32	131-2-4201-19900	Screw, +M3.0x6	2
33	131-2-4201-19502	Screw, Button Hd. Tapping	14
34	131-2-4203-84233	Washer	3
35	131-2-4112-10200	Rope	1
36	141-0-5519-10301	Worm Assy	1
37	141-2-1259-06201	Plate Bottom	1
38	141-2-3169-23200	Frame	1
39	141-2-3169-25400	Guide Angle	1
40	141-2-3519-69000	Angle Mount	1
41	141-2-3519-69100	Angle Mount	1
42	141-2-3519-70300	Angle Mount	1
43	141-2-3519-73300	Plate	1
44	141-2-4459-33200	Cushion	2
45	141-2-5289-01300	Rail	1
46	141-2-5519-60100	Worm Wheel (C)	1
47	141-2-5529-18901	Shaft	1
48	141-2-5649-25800	Belt	1
49	141-2-5739-07300	Support Shaft	1
50	141-2-7319-58000	Holder Slide	1
51	141-2-8519-35300	Spring Base Slide	1
52	131-0-3020-11800	Pully Assy	3
53	131-2-4201-21100	Screw	1
54	141-2-4219-40600	Screw	2
55	131-2-4203-82600	Washer	1
56	134-2-5202-11800	Rubber Cushion	3
57	134-2-6102-15702	Mat Turntable	1
58	134-2-6302-11501	Belt	1
59	141-0-7519-03901	Shaft T.T. Complet	1
60	141-2-3169-23300	Metal Mount Motor	1
61	141-2-3519-67100	Angle Mount (Motor)	1
62	141-2-4459-31800	Cushion	2
63	141-2-5229-00200	Turntable	1
64	134-2-4201-13600	Screw	3
65	134-2-4108-27801	Plate	1
66	134-2-5101-26500	Spring	1
67	134-2-5101-32400	Spring	1
68	141-0-3129-01900	Unit Plate Assy	1
69	141-0-5519-10300	Worm Assy	1
70	141-0-6419-00502	Pick-up Assy	1
70-1	4-1579-27031	Cartridge (MG-37L)	1
1	4-1579-29451	Stylus (ST-37LD)	1
2	134-2-1402-12700	Retainer Needle	1
70-2	141-0-6419-00802	Tone Arm Assy	1

CABINET & CHASSIS PARTS LIST (Continued)

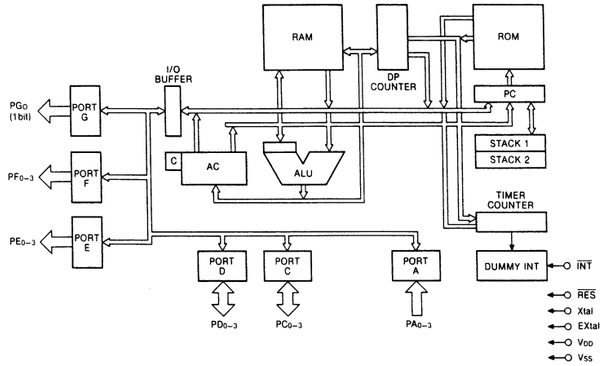
Ref. No.	Part No.	Description	Q'ty
71	141-2-3519-67100	Angle Mount (Motor)	1
72	141-2-3519-67400	Angle Mount (Photo C)	1
73	141-2-3519-73000	Holder	1
74	141-2-4459-31800	Cushion	2
75	141-2-4459-33800	Cushion	2
76	141-2-5519-52100	Worm Wheel (A)	1
77	141-2-5649-25900	Belt	1
78	141-2-7519-64000	Spindle Lifting	1
79	141-2-8519-31900	Spring Slide Base	1
80	141-2-8519-60000	Spring Plate	1
81	141-2-8539-53800	Spring Plate	1
82	134-2-4201-12800	Screw	1
83	131-2-4201-21100	Screw	1
84	131-2-4201-19500	Screw, Button Hd. Tapping	1
85	141-2-4219-06300	Screw	1
86	131-2-4201-19504	Screw, Button Hd. Tapping	1
87	131-2-4201-20800	Screw, M2.6x6	1
88	141-2-4579-05000	Washer	1
89	⚠ 4-2312-06051	Switch Push Power [SW14]	1
90	4-2319-76680	Leaf Switch (Lift Down) [SW9]	1
90	4-2319-76680	Leaf Switch (Lift Up) [SW10]	1
90	4-2319-76680	Leaf Switch (T 58) [SW12]	1
90	4-2319-76680	Leaf Switch (Right End) [SW13]	1
91	4-2319-77560	Leaf Switch (Left End) [SW11]	1
92	⚠ 4-2432-00071	Power Cord	1
93	⚠ 4-2512-21520	Power Trans [T1]	1
94	4-5272-00180	Comutate Mtr Magnet (Lifter) [M2]	1
95	4-5272-00181	Comutate Mtr Magnet (Arm) [M3]	1
96	131-0-4004-16100	Wire Shield Assy	1
97	134-0-5011-03507	Motor Assy [M1]	1
101	141-0-1939-10032	Control P.C.B. Assy	1
102	141-0-1939-10050	Speed P.C.B. Assy	1
103	141-0-1939-10060	Switch P.C.B. Assy	1
104	141-0-1939-10070	PIR P.C.B. Assy	1
105	141-0-1939-17920	Fuse P.C.B. Assy	1
106	141-0-1939-10080	Terminal P.C.B. Assy	1
107	141-0-1939-10090	PCR P.C.B. Assy	1
111	143-3-1902-60611	Screw, Brazier Hd. Tapping-B, +M2.6x6	3
112	143-3-1303-02511	Screw, Pan Hd. Tapping-B, +M3.0x25	1
113	101-3-1702-60411	Screw, Bind Hd., +M2.6x4	1
114	106-3-1102-30311	Hex. Nut-1, M2.3	1
115	103-3-1303-00511	Screw, Pan Hd. Tapping-2, +M3.0x5	2
116	110-3-2102-30011	Spring Washer-2, M2.3	1
117	101-3-1302-00311	Screw, Pan Hd., +M2.0x3	4
118	143-3-1703-00811	Screw, Bind Hd. Tapping-B, +M3.0x8	2
119	106-3-1204-00311	Hex. Nut-2, M4.0	1
120	112-3-1302-00011	E Ring, M2.0	1
121	143-3-1702-00818	Screw, Bind Hd. Tapping-B, +M2.0x8	4
122	101-3-1303-03011	Screw, Pan Hd., +M3.0x30	1
123	143-3-1702-00618	Screw, Bind Hd. Tapping-B, +M2.0x6	1
124	110-3-2104-00011	Spring Washer-2, M4.0	1

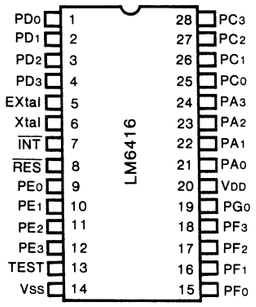
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

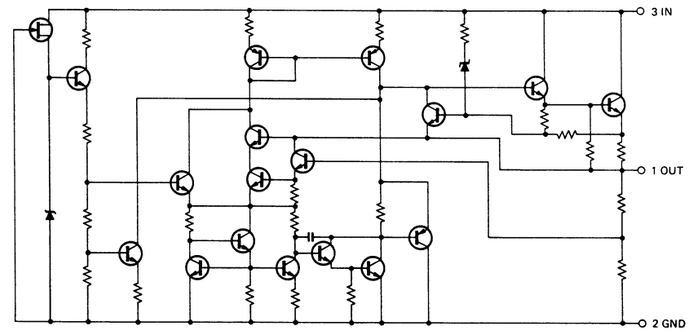
IC SIGNAL FLOW & EQUIVALENT CIRCUIT

CONTROL IC LM 6416 E

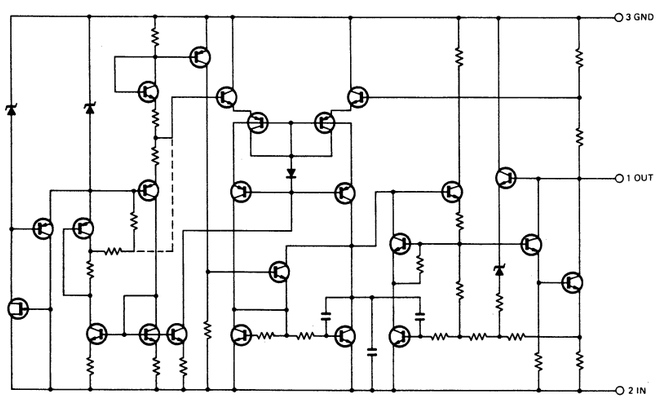




VOLTAGE REGULATOR IC NJM 7812



VOLTAGE REGULATOR IC NJM 7912



TURNTABLE ADJUSTMENTS

Stylus Pressure Adjustment

1. Place the unit on a horizontal plane and remove the lid.
2. Turn on the Power switch of the unit.
3. Press ◄ button on the control panel to shift the tonearm to the place as indicated in Fig. 1.
4. Turn the stylus pressure adjustment screw as shown in Fig. 2 through the stylus pressure adjustment hole, so that the stylus pressure meter indicates 1.8 ~ 2.2 g.

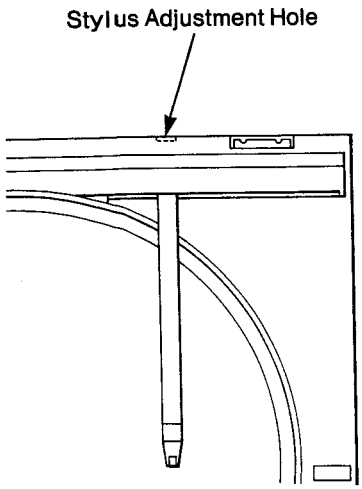


Fig. 1

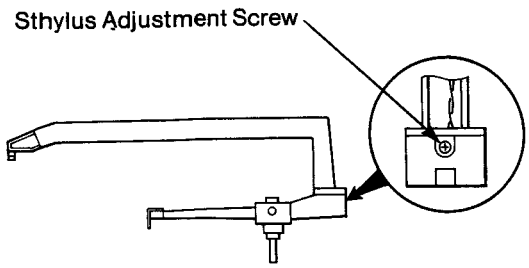


Fig. 2

Tonearm Position Adjustment

1. Turn on the power switch of the unit.
2. Remove the lid and the turntable.
3. Press ◄ button on the control panel to shift the arm to the place where the tonearm position adjustment cam can be observed. (Fig. 3)
4. Adjust the cam, so that the tonearm becomes perpendicular to the rear wall of the cabinet. (Fig. 3)

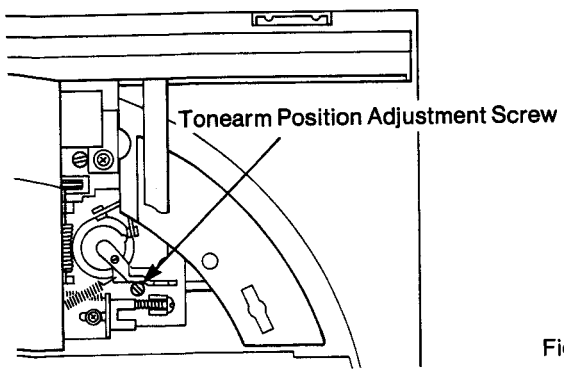


Fig. 3

Stylus Height Adjustment

1. Turn on the power switch of the unit.
2. Remove the lid and the turntable.
3. Press ◄ button on the control panel to shift the arm to the place where the stylus height adjustment screw can be observed. (Fig. 4)
4. Adjust the stylus height to 6mm±0.5mm above the turntable.

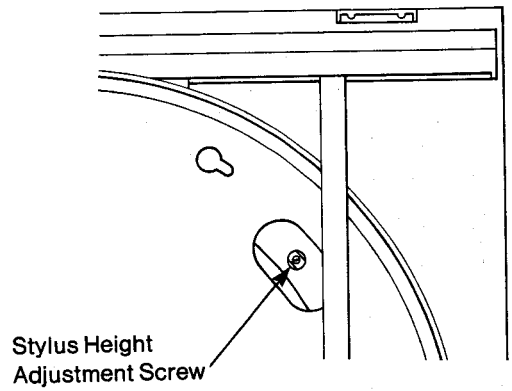


Fig.4

Rotation Adjustment

1. Turn on the power switch of the unit.
2. Use the stroboscope sheet and adjust each volume to obtain proper rotations per minute. (Fig. 5)
   Note: In the first instance, perform the adjustment for 45 r.p.m.

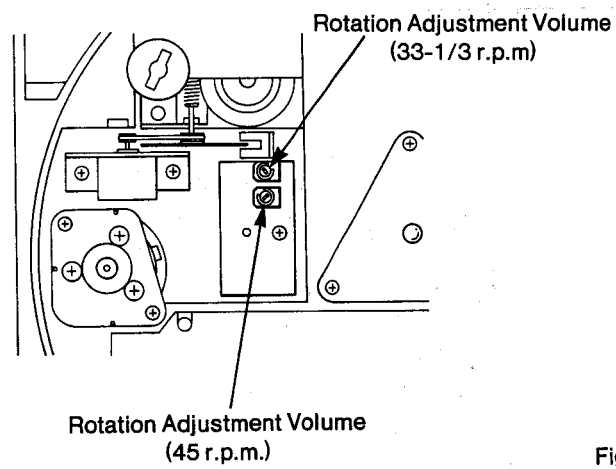


Fig. 5

TURNTABLE ADJUSTMENTS (Continued)

Photointerrupter Position Adjustment for Arm Feed

1. Turn on the power switch of the unit.
2. Place a record with less eccentricity on the turntable and play it.
3. After the record has rotated three or four times, raise the arm by pressing the CUEING button.
4. Turn the arm feed adjustment screw with a screwdriver through the hole on the right side of the cabinet, so that the arm rises straight up. (Fig. 6)

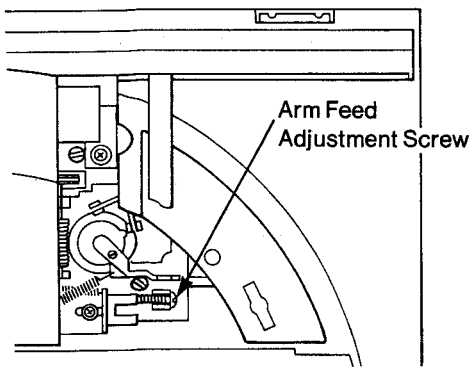


Fig. 6

Lead-in Position Adjustment

1. Turn on the power switch of the unit.
2. Place a record on the turntable and perform the lead-in operation.
3. Adjust the lead-in position adjustment cam, so that the record is led into the correct position.
   Note: If the cam is turned clockwise, the tonearm moves inward. It moves outward if the cam is turned counter-clockwise. (Fig. 7)

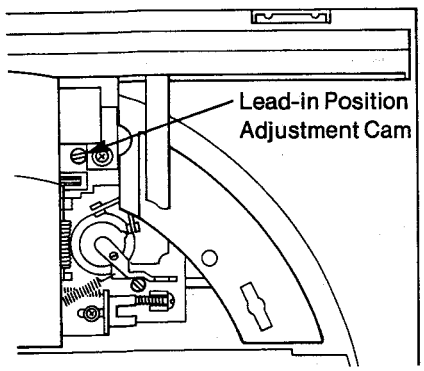
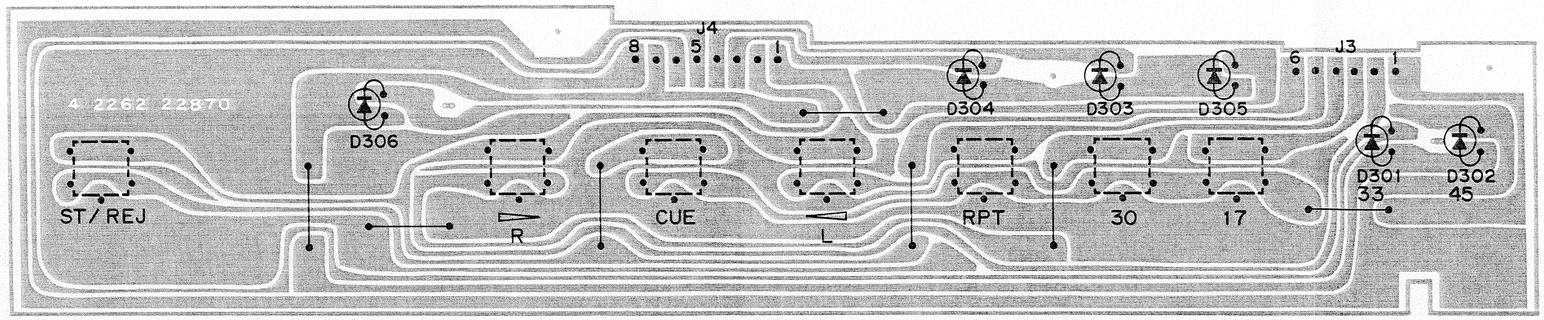
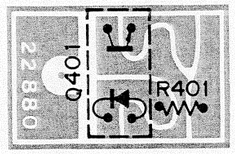


Fig. 7

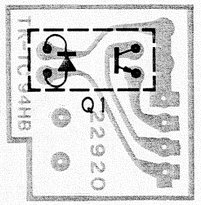
SWITCH P.C.BOARD
(BOTTOM VIEW)



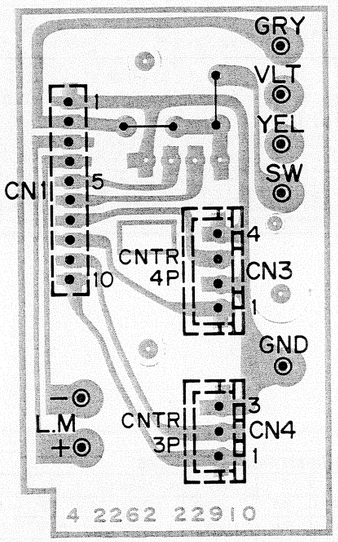
PIR P.C.BOARD
(BOTTOM VIEW)



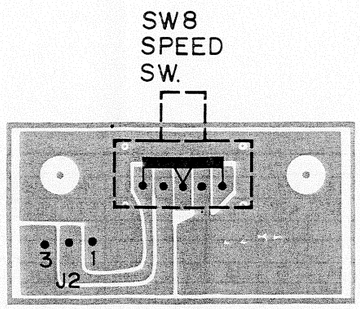
PCR P.C.BOARD
(BOTTOM VIEW)



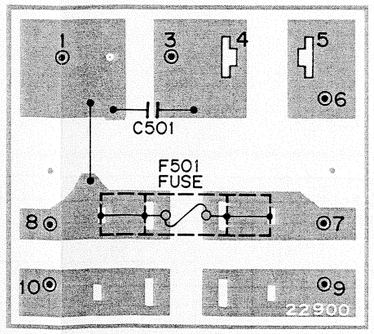
TERMINAL P.C.BOARD
(BOTTOM VIEW)



SPEED P.C.BOARD
(BOTTOM VIEW)

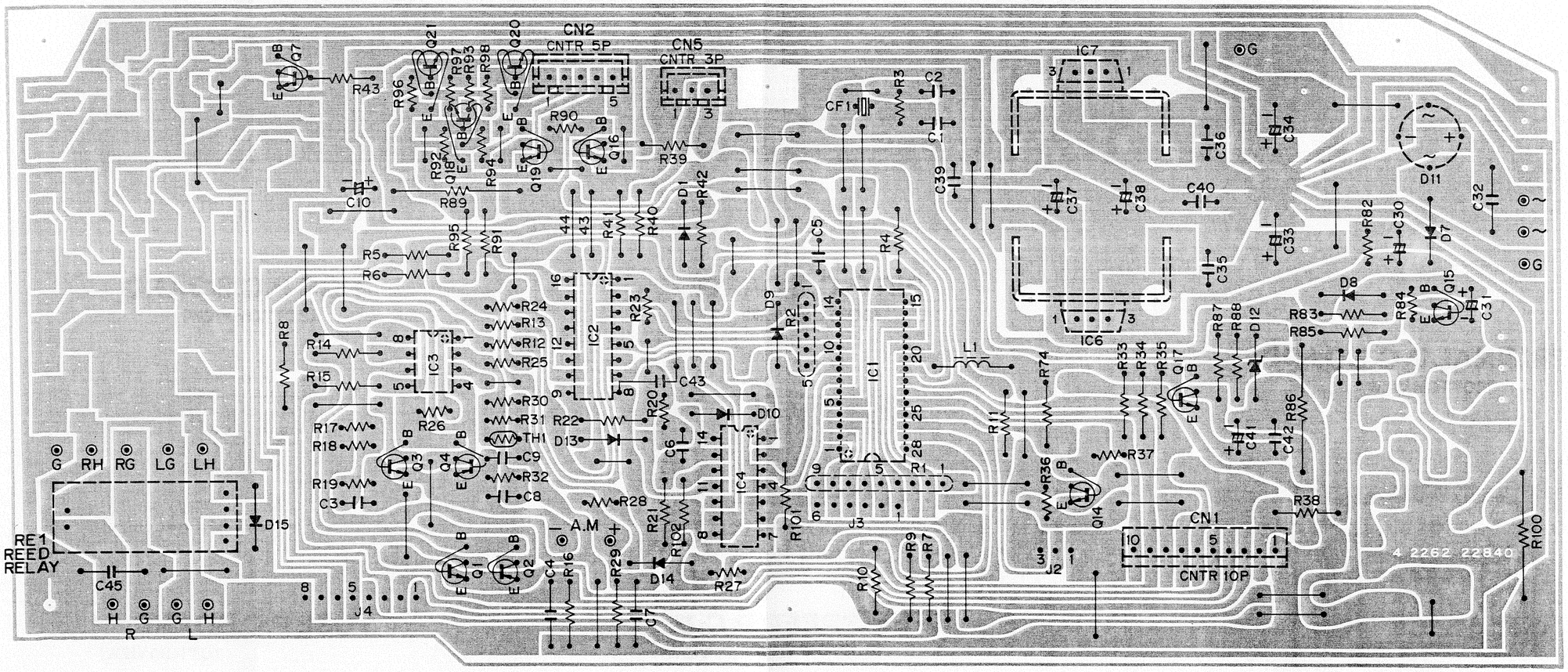


FUSE P.C.BOARD
(BOTTOM VIEW)



CONTROL P.C.BOARD

(BOTTOM VIEW)



IC PIN NUMBERS DC VOLTAGES

SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC1	LM6416E	5.2V	5.2V	5.2V	5.2V	2.5V	2V	5.2V	5.2V	5V	5V	5.2V	5.2V	0V	0V	4.7V	4.2V	4.2V	3.2V	5.2V	5.2V
		21	22	23	24	25	26	27	28												
		0V	0V	5.2V	0V	3.8V	4.5V	5.1V	5.2V												
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
IC2	MSM4049RS	5.2V	0V	5.2V	0V	5V	0V	5V	0V	5.2V	0V	5.2V	0.5V	–	0.5V	5.1V	–				
IC3	M5218P	−0.5V	0V	0V	−12V	0V	0V	−0.6V	11.9V												
IC4	LC4011B	5.2V	0V	5.2V	5.2V	0V	0V	0V	5.2V	5.2V	0V	5.2V	4.6V	0V	5.2V						

TRANSISTOR DC VOLTAGES

SYMBOL No.	DEVICE	B	C	E	SYMBOL No.	DEVICE	B	C	E
Q1	2SC2274	−0.6V	11.9V	0V	Q16	2SC2274	0V	11.9V	1.1V
Q2	2SA984	−0.6V	−12.3V	0V	Q17	2SC2274	5.9V	9.8V	5.2V
Q3	2SD863	−0.5V	11.9V	0V	Q18	2SC536	0.2V	11.1V	0V
Q4	2SB764	−0.5V	−12.3V	0V	Q19	2SC536	2.2V	1.6V	1.6V
Q7	2SC536	0.7V	0V	0V	Q20	2SC536	0V	1.6V	1.1V
Q14	2SC536	0V	5.2V	0V	Q21	2SC536	0.7V	0V	0V
Q15	2SC536	0.6V	0V	0V					

P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description				Q'ty
	CONTROL P.C.B. ASSY					
101	141-0-1939-10032	Control P.C.B. Assy				1
	4-2369-73780	RT Pin 1P				1
	103-3-1903-00611	Screw, Brazier Hd. Tapping-2, +M3.0x6				2
	111-2-6220-11100	Wire Wrap Terminal				14
	131-2-6201-21500	Plate Heat Sink (for IC6, IC7)				2
CN1	4-2362-00140	Plug 10P				1
CN2	4-2369-73150	Plug 5P				1
CN5	4-2369-73130	Plug 3P				1
J2	131-2-9800-01041	Jumper				1
J3	131-2-9800-01058	Jumper				1
J4	131-2-9800-01099	Jumper				1
L1	4-2532-00540	Choke Coil (47μH)				1
CF1	4-2259-70780	CSB 800K				1
TH1	204-5-9000-05000	Thermistor, SDT 500				1
D1	202-5-2810-44210	Diode, DS 442				1
D7	212-5-4390-13510	Diode, DS 135				1
D8	202-5-2810-44210	Diode, DS 442				1
D9	202-5-2810-44210	Diode, DS 442				1
D10	202-5-2810-44210	Diode, DS 442				1
D11	DGG- - -W02- - - - - - -	Diode, W 02				1
D12	202-5-3210-05613	Zener Diode, GZA5.6Z				1
D13	202-5-2810-44210	Diode, DS 442				1
D14	202-5-2810-44210	Diode, DS 442				1
D15	202-5-2810-44210	Diode, DS 442				1
IC1	208-5-8036-41648	IC, LM6416E-489				1
IC2	4-2069-72530	IC, MSM 4049 RS				1
IC3	4-2069-73890	IC, M 5218 P				1
IC4	206-5-9504-01110	IC, LC 4011 B				1
IC6	4-2069-72560	IC, NJM 7812				1
IC7	4-2069-72570	IC, NJM 7912				1
Q1	203-5-7252-27460	Transistor, 2SC 2274				1
Q2	203-5-6820-98460	Transistor, 2SA 984				1
Q3	203-5-7340-86360	Transistor, 2SD 863				1
Q4	203-5-7350-76460	Transistor, 2SB 764				1
Q7	203-5-5000-53670	Transistor, 2SC 536				1
Q14	203-5-5000-53660	Transistor, 2SC 536				1
Q15	203-5-5000-53660	Transistor, 2SC 536				1
Q16	203-5-7252-27460	Transistor, 2SC 2274				1
Q17	203-5-7252-27460	Transistor, 2SC 2274				1
Q18	203-5-5000-53660	Transistor, 2SC 536				1
Q19	203-5-5000-53660	Transistor, 2SC 536				1
Q20	203-5-5000-53660	Transistor, 2SC 536				1
Q21	203-5-5000-53660	Transistor, 2SC 536				1
RE1	4-2329-70310	Reed Relay				1
C1	CC2-2-1500-KD00C	Ceramic	220pF	50V	±10%	1
C2	CC2-2-1500-KD00C	Ceramic	220pF	50V	±10%	1
C3	CC3-3-1500-KD00C	Ceramic	330pF	50V	±10%	1
C4	CI1-0-3250-MF00R	Boundary	0.01μF	25V	±20%	1
C5	CM1-0-4500-J00TV	Mylar	0.1μF	50V	±5%	1
C6	CM1-5-4500-J00TV	Mylar	0.15μF	50V	±5%	1
C7	CI1-0-3250-MF00R	Boundary	0.01μF	25V	±20%	1
C8	CC3-3-1500-KD00C	Ceramic	330pF	50V	±10%	1
C9	CC6-8-1500-KD00C	Ceramic	680pF	50V	±10%	1
C10	CD3-3-5500-0001V	Electrolytic	3.3μF	50V		1
C30	CD4-7-5500-0001V	Electrolytic	4.7μF	50V		1
C31	CD1-0-6250-0001V	Electrolytic	10μF	25V		1
C32	CC1-0-3501-YEY0C	Ceramic	0.01μF	500V	+100,-0%	1
C33	4-2239-71360	Electrolytic	1000μF	25V		1
C34	CD4-7-7250-0006V	Electrolytic	470μF	25V		1
C35	CC1-0-3500-ZG00C	Ceramic	0.01μF	50V	+80,-20%	1
C36	CC1-0-3500-ZG00C	Ceramic	0.01μF	50V	+80,-20%	1
C37	CD1-0-7160-0001V	Electrolytic	100μF	16V		1
C38	CD1-0-7160-0001V	Electrolytic	100μF	16V		1

Ref. No.	Part No.	Description				Q'ty
C39	CM1-0-4500-J00TV	Mylar	0.1μF	50V	±5%	1
C40	CM1-0-4500-J00TV	Mylar	0.1μF	50V	±5%	1
C41	CD4-7-6100-0001V	Electrolytic	47μF	10V		1
C42	CM1-0-4500-J00TV	Mylar	0.1μF	50V	±5%	1
C43	CC5-6-2500-KE00C	Ceramic	0.0056μF	50V	±10%	1
C45	CI1-0-3250-MF00R	Boundary	0.01μF	25V	±20%	1
R1	4-2219-70460	Resistor (10kΩ x 8)				1
R2	4-2219-71270	Resistor (10kΩ x 4)				1
R3	401 024 8001	CARBON 1M JA 1/6W				1
R4	401 012 7009	CARBON 10K JA 1/4W				1
R5	401 019 1000	CARBON 390 JA 1/4W				1
R6	401 019 1000	CARBON 390 JA 1/4W				1
R7	401 019 1000	CARBON 390 JA 1/4W				1
R8	401 015 1608	CARBON 180 JA 1/4W				1
R9	401 019 1000	CARBON 390 JA 1/4W				1
R10	401 015 1608	CARBON 180 JA 1/4W				1
R11	401 012 5708	CARBON 1K JA 1/4W				1
R12	401 026 1000	CARBON 2.7K JA 1/6W				1
R13	401 027 8305	CARBON 820 JA 1/6W				1
R14	401 016 3809	CARBON 2.2K JA 1/4W				1
R15	401 020 0801	CARBON 470 JA 1/4W				1
R16	401 017 7608	CARBON 3.9 JA 1/4W				1
R17	401 026 9600	CARBON 470 JA 1/6W				1
R18	401 026 9600	CARBON 470 JA 1/6W				1
R19	401 024 7004	CARBON 1K JA 1/6W				1
R20	401 026 0607	CARBON 270 JA 1/6W				1
R21	401 016 5803	CARBON 220K JA 1/4W				1
R22	401 012 7009	CARBON 10K JA 1/4W				1
R23	401 026 0607	CARBON 270 JA 1/6W				1
R24	401 026 7002	CARBON 3.9K JA 1/6W				1
R25	401 024 9305	CARBON 1.2K JA 1/6W				1
R26	401 025 7805	CARBON 2.2K JA 1/6W				1
R27	401 026 9907	CARBON 4.7K JA 1/6W				1
R28	401 026 9600	CARBON 470 JA 1/6W				1
R29	401 017 7608	CARBON 3.9 JA 1/4W				1
R30	401 026 9600	CARBON 470 JA 1/6W				1
R31	401 026 9600	CARBON 470 JA 1/6W				1
R32	401 024 7004	CARBON 1K JA 1/6W				1
R33	401 012 5708	CARBON 1K JA 1/4W				1
R34	401 012 5708	CARBON 1K JA 1/4W				1
R35	401 012 5708	CARBON 1K JA 1/4W				1
R36	401 024 7004	CARBON 1K JA 1/6W				1
R37	401 026 9907	CARBON 4.7K JA 1/6W				1
R38	401 021 1906	CARBON 560 JA 1/4W				1
R39	401 012 2905	CARBON 10 JA 1/4W				1
R40	401 014 5201	CARBON 15K JA 1/4W				1
R41	401 012 7009	CARBON 10K JA 1/4W				1
R42	401 012 7009	CARBON 10K JA 1/4W				1
R43	401 012 7009	CARBON 10K JA 1/4W				1
R74	401 012 7009	CARBON 10K JA 1/4W				1
R82	401 027 5502	CARBON 6.8K JA 1/6W				1
R83	401 022 4104	CARBON 68K JA 1/4W				1
R84	401 024 7400	CARBON 10K JA 1/6W				1
R85	401 012 7009	CARBON 10K JA 1/4W				1
R86	401 062 0500	OXIDE-MT 47 JA 1W				1
R87	401 022 1905	CARBON 680 JA 1/4W				1
R88	401 016 2604	CARBON 220 JA 1/4W				1
R89	401 062 1408	OXIDE-MT 470 JA 1W				1
R90	401 024 7400	CARBON 10K JA 1/6W				1
R91	401 012 7009	CARBON 10K JA 1/4W				1
R92	401 024 7400	CARBON 10K JA 1/6W				1
R93	401 026 9907	CARBON 4.7K JA 1/6W				1
R94	401 027 3003	CARBON 56K JA 1/6W				1
R95	401 012 7009	CARBON 10K JA 1/4W				1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
R96	401 024 7400	CARBON 10K JA 1/6W	1
R97	401 026 9907	CARBON 4.7K JA 1/6W	1
R98	401 027 3003	CARBON 56K JA 1/6W	1
R100	401 061 2703	OXIDE-MT 330 JA 1W	1
R101	401 012 5708	CARBON 1K JA 1/4W	1
R102	401 012 5708	CARBON 1K JA 1/4W	1
	SPEED P.C.B. ASSY		
102	141-0-1939-10050	Speed P.C.B. Assy	1
	141-2-3529-43500	Spacer	1
SW8	4-2319-76670	Slide Switch (Speed)	1
	SWITCH P.C.B. ASSY		
103	141-0-1939-10060	Switch P.C.B. Assy	1
	141-2-3519-72900	Spacer	1
SW1	4-2312-05802	Keyboard Switch	1
SW2	4-2312-05802	Keyboard Switch	1
SW3	4-2312-05802	Keyboard Switch	1
SW4	4-2312-05802	Keyboard Switch	1
SW5	4-2312-05802	Keyboard Switch	1
SW6	4-2312-05802	Keyboard Switch	1
SW7	4-2312-05802	Keyboard Switch	1
D301	DYY- - -SLR- -54VT-	LED, SLR 54 VT 3	1
D302	DYY- - -SLR- -54VT-	LED, SLR 54 VT 3	1
D303	DYY- - -SLR- -54VT-	LED, SLR 54 VT 3	1
D304	DYY- - -SLR- -54PT-	LED, SLR 54 PT 3	1
D305	DYY- - -SLR- -54VT-	LED, SLR 54 VT 3	1
D306	DYY- - -SLR- -54PT-	LED, SLR 54 PT 3	1
	PIR P.C.B. ASSY		
104	141-0-1939-10070	PIR P.C.B. Assy	1
CN5	4-2359-78183	Connector 3P Assy	1
Q401	4-2039-71430	Photo Interrupter	1
R401	401 021 2200	CARBON 560 JA 1/4W	1
	FUSE P.C.B. ASSY		
105	141-0-1939-17920	Fuse P.C.B. Assy	1
	⚠ 4-2352-00200	Fuse Holder	2
	4-2372-00830	EC Terminal 1P	2
	111-2-6220-11100	Wire Wrap Terminal	5
	131-2-6114-00200	Cover Safety	1
F501	⚠ 4-2349-20960	Fuse (T 200mA)	1
C501	⚠ 4-2239-70970	Capacitor 0.01μF 400V	1
	TERMINAL P.C.B. ASSY		
106	141-0-1939-10080	Terminal P.C.B. Assy	1
	111-2-6220-11100	Wire Wrap Terminal	4
CN1	4-2359-78350	Connector 10P Assy	1
CN3	4-2369-73140	Plug 4P	1
CN4	4-2369-73130	Plug 3P	1
	PCR P.C.B. ASSY		
107	141-0-1939-10090	PCR P.C.B. Assy	1
Q1	4-2039-71430	Photo Interrupter	1

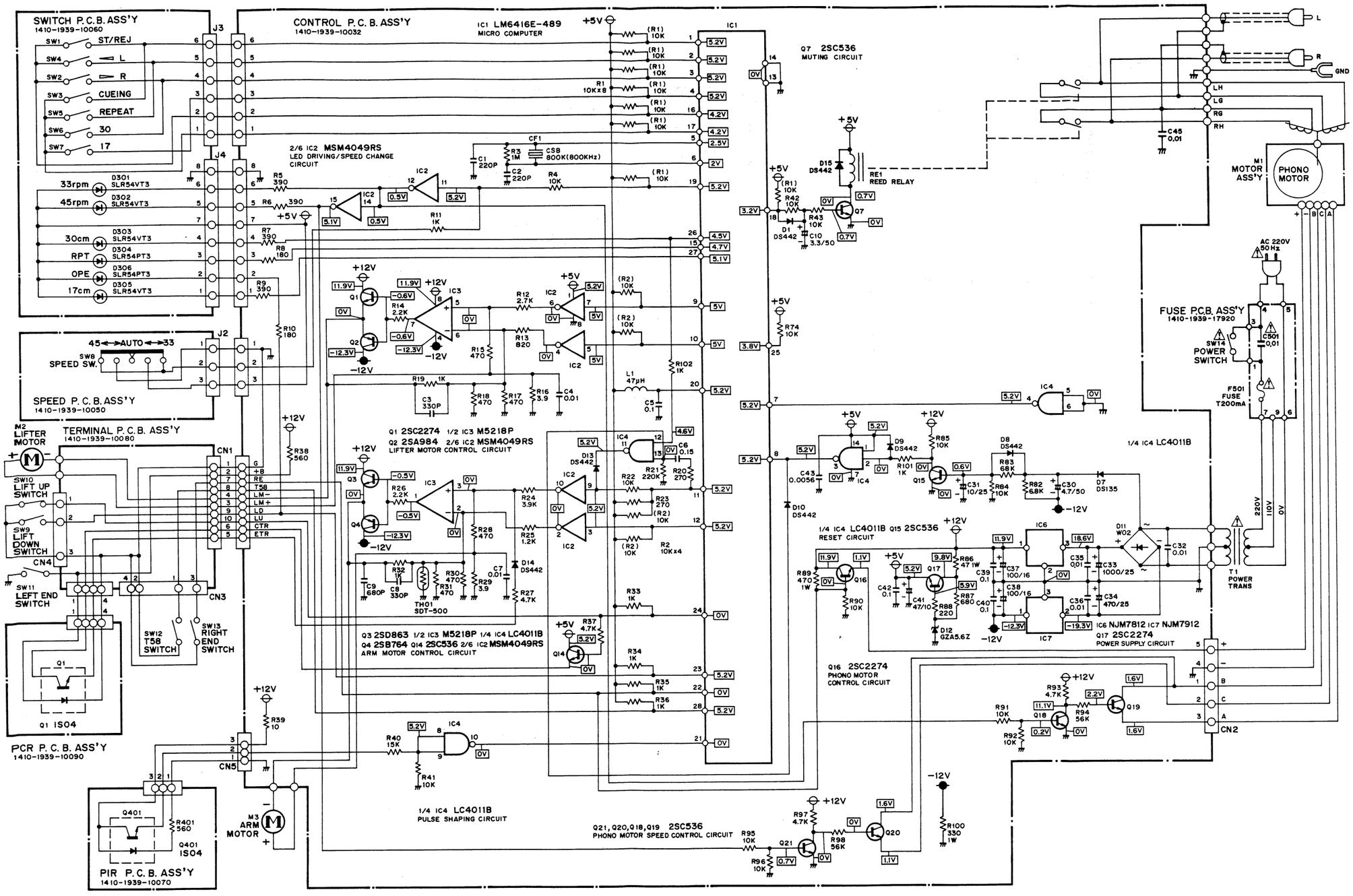
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

SCHEMATIC DIAGRAM



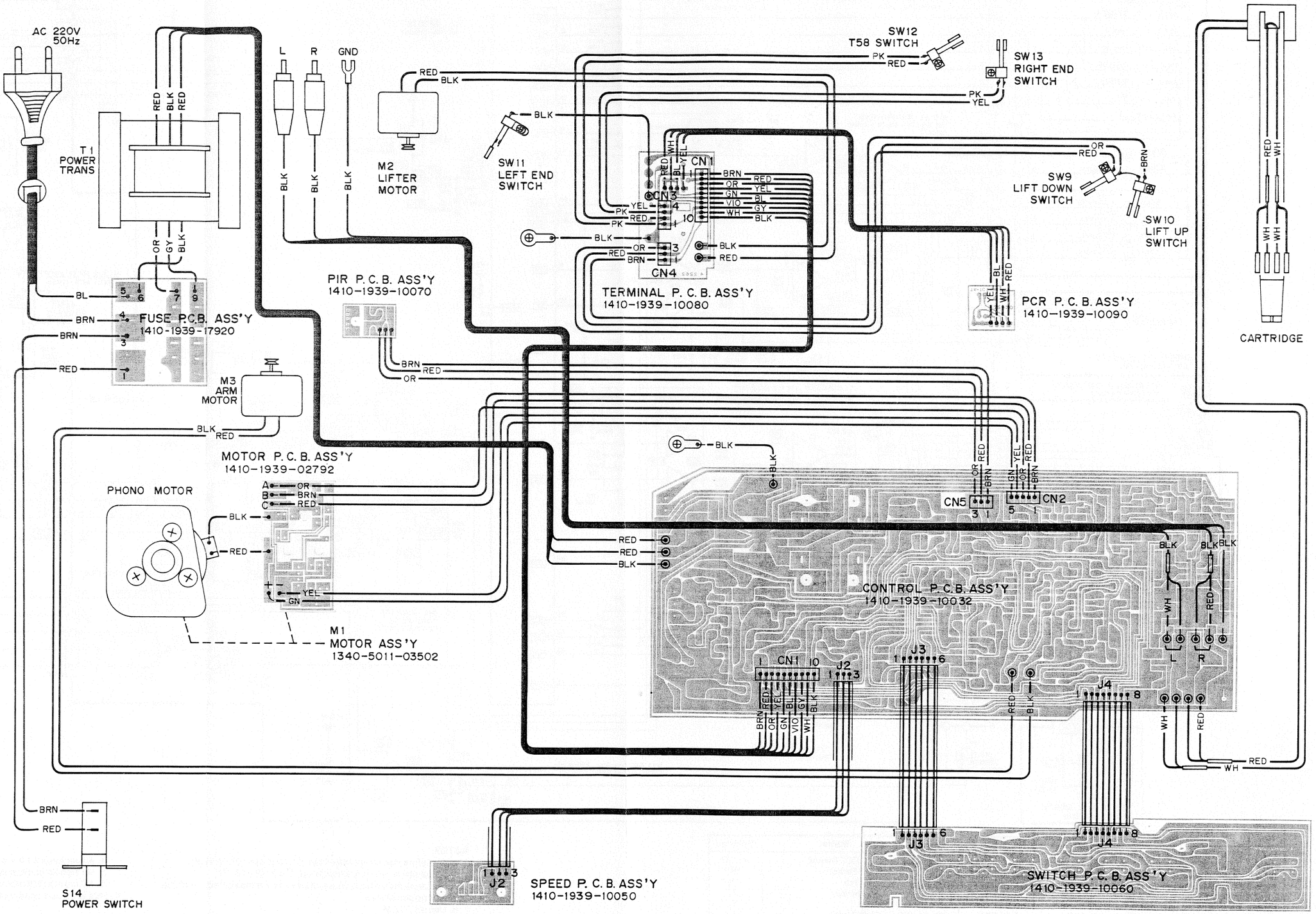
No.	Name	Position	No.	Name	Position
SW1	START / REJECT Switch	OFF	SW8	SPEED SELECT Switch	AUTO
SW2	REVERSE Switch (▷)	OFF	SW9	LIFT DOWN Switch	OFF
SW3	CUEING Switch	OFF	SW10	LIFT UP Switch	ON
SW4	FORWARD Switch (◁)	OFF	SW11	LEFT END Switch	OFF
SW5	REPEAT Switch	OFF	SW12	T58 Switch	OFF
SW6	DISC SIZE Switch (30)	OFF	SW13	RIGHT END Switch	OFF
SW7	DISC SIZE Switch (17)	OFF	SW14	POWER Switch	OFF

NOTES:

1. All resistors values are indicated in "ohm" (K=10^3, M=10^6).
2. All capacitors values are indicated in "μF" (P=10^{-12}).
3. All voltages indicated on the schematics are measured under the following conditions.
   a. Use a V.T.V.M.
   b. All voltages ±10 % with respect to chassis ground.
   c. No signals at input terminals.
   d. AC input at 220 volts 50 Hz.
4. This is a basic schematic diagram.

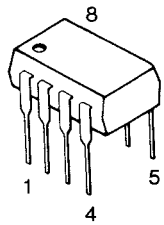
Because Fisher products are subject to continuous improvement, Fisher Corporation reserves the right to make any changes or modifications without notice.

POINT TO POINT WIRING DIAGRAM

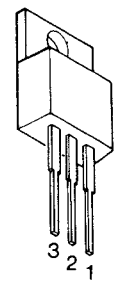


SEMICONDUCTOR LEAD IDENTIFICATION

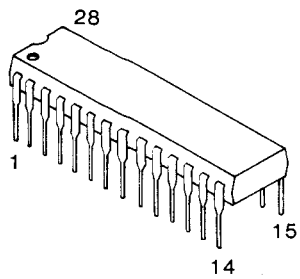
INTEGRATED CIRCUITS



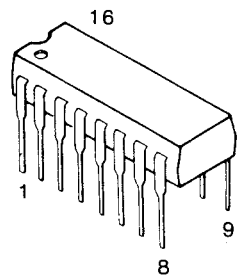
- M 5128 P



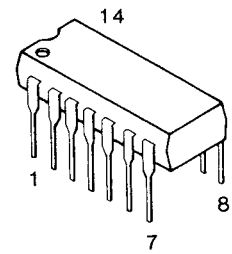
- NJM 7812
- NJM 7912



- LM 6416 E-489

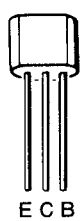


- MSM 4049 RS

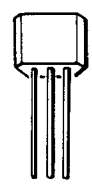


- LC 4011 B

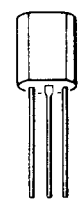
BI-POLAR TRANSISTORS



- 2SA 608
- 2SA 984
- 2SC 2274
- 2SC 536

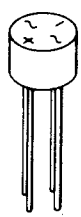


- 2SD 1012

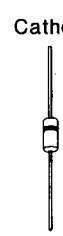


- 2SB 764
- 2SD 863

DIODES



- W 02



- DS 442
- GZA 5.6 Z